

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Shoji OHNO *et al.*  
Serial No.: Unassigned (§53b Continuation of 09/456,294)  
Filed: 21 February 2002  
For: MAGNETIC RECORDING/REPRODUCING APPARATUS  
Art Unit: Unassigned (Parent - 2615)  
Examiner: Unassigned (Parent - T. Tran)

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

21 February 2002

Sir:

Prior to calculating the filing fee in connection with the above-identified application, the following amendments and remarks are respectfully submitted.

**IN THE TITLE:**

Please amend the title of the application to read -- MAGNETIC  
RECORDING/REPRODUCING APPARATUS FOR SEARCHING PROGRAMS  
RECORDED ON MAGNETIC TAPE--.

**IN THE SPECIFICATION:**

Page 1, before the section title in line 1 ("BACKGROUND OF THE  
INVENTION"), please enter the following new section:

**--REFERENCE TO EARLIER FILED APPLICATIONS**

This application is a continuation of U.S. Serial 09/456,294 filed 8 December  
1999, allowed, which is a continuation of U.S. Serial No. 09/057,340 filed 9 April

1998, now U.S. Patent 6,038,366, which is a continuation of U.S. Serial No. 08/500,261 filed 10 July 1995, now U.S. Patent No. 5,761,371.--.

Please delete the paragraph at page 1, lines 3-14, and enter the following replacement paragraph therefor:

The present invention generally relates to a magnetic recording and reproducing apparatus (also known as a video taper recorder, or VTR for short). More particularly, the invention is concerned with a magnetic recording/reproducing apparatus which is imparted with capabilities of easily discriminating or identifying a cassette tape as loaded, searching a desired program recorded thereon, indexing heading portions of programs, displaying captions or teletext, and so forth, by making use of information signals such as a character signal (teletext signal), control signals, etc. which are superposed on a video signal.

Please delete the paragraph bridging pages 2 and 3 of the specification (page 2, line 17 through page 3, line 8), and enter the following replacement paragraph therefor:

Further, Japanese Patent Application No. 96115/1993 (corresponding to JP-A-6-309848), assigned to the same Assignee as that of the present application, discloses an apparatus for displaying, on a monitor screen, the information concerning the situation of recording on a magnetic tape usually encased within a cassette for the purpose of facilitating the search or indexing of a heading portion of a program recorded on the tape. More specifically, a memory or storage device for storing information data is incorporated in the magnetic recording/reproducing

apparatus, while recording date/time and a time code are recorded on the magnetic tape as the tape identification information in a vertical blanking interval of a video signal for a program. Upon play-back of the magnetic tape, the tape identification information is utilized in displaying, en bloc, the contents of records on the tape in the form of a list by referencing the information stored in the memory.

Please delete the paragraph bridging pages 7-10 (page 7, line 18 through page 10, line 3), and enter the following replacement paragraph therefor:

In a recording mode, a record signal (i.e., signal to be recorded) is inputted from a tuner 1 of a television receiver or from an external video source by way of an corresponding input terminal 110 to be modulated by a video signal processing circuit 2 for recording on a magnetic tape 111. In that case, information signals such as those illustrated in Figs. 3A and 3B and Figs. 4A to 4C are written in vertical blanking intervals of the video signal by an encoder circuit 3. More specifically, all the information written in a vertical blanking interval 31 (conventionally referred to also as the V-blanking interval) of the video signal is illustrated in Fig. 3A. As can be seen in the figure, a teletext (i.e., television text broadcasting) information signal 32 is superposed at a horizontal synchronizing pulse position 21H (21st line), while a tape map information signal 33 is superposed at the a horizontal synchronizing pulse position 19H (19-th line). Referring to Fig. 3B, the tape map information signal 33 is composed of a burst signal 33a, a clock signal (CLK) 33b and data (DATA) 33c. As an example of the data 33c, a start code is shown in Fig. 3B. The tape map information signal 33 is written at the 19-th line or 19H (where H represents the horizontal synchronizing pulse and thus "19H" represents the 19-th horizontal

synchronizing pulse position) in each of the vertical blanking periods located immediately before the individual frames "1", "2", ..., of the video signal, as shown in Figs. 4A to 4C. As the tape map information to be written, there can be mentioned a start code (of 16 bits) written immediately before the frame "1", VTR manufacture number data (of 24 bits) written in the vertical blanking interval immediately before the frame "2" and a preceding half portion of the vertical blanking interval immediately before the frame "3", a currently loaded tape ID number (of 8 bits) written in a succeeding half of the vertical blanking interval before the frame "3", a serial tape number (of 8 bits) written in a preceding half of the vertical blanking interval immediately before the frame "4" and tape species information (of 8 bits) written in a succeeding half of the vertical blanking interval before the frame "4". In the vertical blanking intervals preceding to the succeeding frames "5", "6", ..., "11", respectively, there are written data such as illustrated in Figs. 4A to 4C. Since one data consists of two bytes or 16 bits, the tape map data as written amounts to 22 bytes (where one byte equals eight bits) in total. The data of 22 bytes are written in the vertical blanking intervals of the video signal in succession until the end of the recording. Of the data to be written, the start code data, the VTR manufacture number data, the currently loaded tape ID number data, the serial tape number data and the tape species data are prepared in a library memory 4. Further, data of receiving channel of the tuner 1, current date/time data generated by a timepiece circuit 13, residual tape data calculated on the basis of output of a reel sensor 16 which is adapted to detect rotations of a reel support 17a and bilingual/stereo mode data generated by a sound multiplex decoder 18 are supplied to a tape map controller 5 as the data to be written in such a number as illustrated in Figs. 4A to

4C. These data are written in the vertical blanking intervals of the video signal, as mentioned above, through the encoder circuit 3 under the control of the tape map controller 5.

**INTHE CLAIMS:**

Please cancel Claims 2-10, without prejudice or disclaimer.

**REMARKS**

This paper is submitted for entry in the above-identified new U.S. continuation application.

**APPLICATION TITLE AMENDED**

The title of the present application has been amended to coincide with the title entered in the parent case.

**SPECIFIC REFERENCE TO EARLIER FILED APPLICATIONS**

The present application has been amended to complete identification of the prior applications from which benefit is claimed in the present case, and their present status. Applicant will update the status of the prior applications as such information becomes available.

**PENDING CLAIMS**

Claims 2-10 have been cancelled from the present application, and Claim 1 is pending. Applicant reserves the right to submit a Supplemental Preliminary

Amendment including Claim 1 with amendments, or new claims, for entry and examination in the present application.

### ASSIGNMENT

Full right, title and interest in and to the present application is assigned to HITACHI, LTD., by virtue of the Assignment filed in the prior application Serial No. 08/500,261 (now U.S. Patent No. 5,761,371), recorded 10 July 1995 at Reel 7575, Frames 511 *et seq.*

### INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement with Forms PTO-1449 listing all of the references of record in the prior applications is submitted concurrently herewith to make the references listed on the Forms PTO-1449 of record in the present case.

### PRIORITY

Priority is claimed under 35 U.S.C. §119 of JP 06-161842 filed 14 July 1994, as indicated on the Declaration filed with the present application. The certified copy of the priority document was submitted in prior application Serial No. 08/500,261 on 23 August 1995. Acknowledgment of the perfection of the claim for priority in the present application is respectfully requested.

### EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703-312-6600 for discussing any

Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

### APPENDIX A-MARKED VERSION

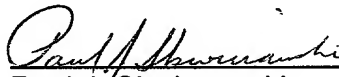
Attached hereto is "Appendix A-Marked Version" indicating the additions and deletions made herein to the specification by underlining and brackets, respectively.

### CONCLUSION

Applicant will timely submit further claims and/or claim amendments for consideration and examination in the present application.

No additional claim fees or Petition fees for extensions of time are required for the filing of this Preliminary Amendment. Please charge any shortage in the fees due in connection with the filing of the application to ATS&K Deposit Account No. 01-2135 (referencing case No. 500.33680CC3).

Respectfully submitted,



Paul J. Skwierawski  
Registration No. 32,173  
ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 North Seventeenth Street, Suite 1800  
Arlington, VA 22209  
Telephone 703-312-6600  
Facsimile 703-312-6666

ATTACHMENTS:  
Appendix A-Marked Version

**APPENDIX A-MARKED VERSION**

Paragraph at page 1, lines 3-14:

The present invention generally relates to a magnetic recording and reproducing apparatus (also known as a video [taper] tape recorder<sub>1</sub> or VTR for short). More particularly, the invention is concerned with a magnetic recording/reproducing apparatus which is imparted with capabilities of easily discriminating or identifying a cassette tape as loaded, searching a desired program recorded thereon, indexing heading portions of programs, displaying [caption] captions or teletext<sub>1</sub> and so forth<sub>1</sub> by making use of information signals such as a character signal (teletext signal), control signals, etc. which are superposed on a video signal.

Paragraph bridging pages 2 and 3 of the specification (page 2, line 17 through page 3, line 8):

[Besides] Further, Japanese Patent Application No. 96115/1993 (corresponding to JP-A-6-309848)<sub>1</sub> assigned to the same [assignee] Assignee as that of the present application<sub>1</sub> discloses an apparatus for displaying<sub>1</sub> on a monitor screen<sub>1</sub> the information concerning the situation of [records] recording on a magnetic tape usually encased within a cassette for the purpose of facilitating the search or indexing of a heading portion of a program recorded on the tape. More specifically, a memory or storage device for storing information data is incorporated in the magnetic recording/reproducing apparatus, while recording date/time and a time code are recorded on the magnetic tape as the tape identification information in a



vertical blanking interval of a video signal for a program. Upon play-back of the magnetic tape, the tape identification information is utilized in displaying, en bloc, the contents of records on the tape in the form of a list by referencing the information stored in the memory.

Paragraph bridging pages 7-10 (page 7, line 18 through page 10, line 3):

In a recording mode, a record signal (i.e., signal to be recorded) is inputted from a tuner 1 of a television receiver or from an external video source by way of an corresponding input terminal 110 to be modulated by a video signal processing circuit 2 for recording on a magnetic tape 111. In that case, information signals such as those illustrated in Figs. 3A and 3B and Figs. 4A to 4C are written in vertical blanking intervals of the video signal by an encoder circuit 3. More specifically, all the information written in a vertical blanking interval 31 (conventionally referred to also as the V-blanking interval) of the video signal is illustrated in Fig. 3A. As can be seen in the figure, a teletext (i.e., television text broadcasting) information signal 32 is superposed at a horizontal synchronizing pulse position 21H (21st line), while a tape map information signal 33 is superposed at the a horizontal synchronizing pulse position 19H (19-th line). Referring to Fig. 3B, the tape map information signal 33 is composed of a burst signal 33a, a clock signal (CLK) 33b and data (DATA) 33c. As an example of the data 33c, a start code is shown in Fig. 3B. The tape map information signal 33 is written at the 19-th line or 19H (where H represents the horizontal synchronizing pulse and thus "19H" represents the 19-th horizontal synchronizing pulse position) in each of the vertical blanking periods located immediately before the individual frames "1", "2", ..., of the video signal, as shown in

Figs. 4A to 4C. As the tape map information to be written, there can be mentioned a start code (of 16 bits) written immediately before the frame "1", VTR manufacture number data (of 24 bits) written in the vertical blanking interval immediately before the frame "2" and a preceding half portion of the vertical blanking interval immediately before the frame "3", a currently loaded tape ID number (of 8 bits) written in a succeeding half of the vertical blanking interval before the frame "3", a serial tape number (of 8 bits) written in a preceding half of the vertical blanking interval immediately before the frame "4" and tape species information (of 8 bits) written in a succeeding half of the vertical blanking interval before the frame "4". In the vertical blanking intervals preceding to the succeeding frames "5", "6", ..., "11", respectively, there are written data such as illustrated in Figs. 4A to 4C. Since one data consists of two bytes or 16 bits, the tape map data as written amounts to 22 bytes (where one byte equals eight bits) in total. The data of 22 bytes are written in the vertical blanking intervals of the video signal in secession [till] until the end of the recording. Of the data to be written, the start code data, the VTR manufacture number data, the currently loaded tape ID number data, the serial tape number data and the tape species data are prepared in a library memory 4. Further, data of receiving channel of the tuner 1, current date/time data generated by a timepiece circuit 13, residual tape data calculated on the basis of output of a reel sensor 16 which is adapted to detect rotations of a reel support 17a and bilingual/stereo mode data generated by a sound multiplex decoder 18 are supplied to a tape map controller 5 as the data to be written in such a number as illustrated in Figs. 4A to 4C. These data are written in the vertical blanking intervals of the video signal, as

mentioned above, through the encoder circuit 3 under the control of the tape map controller 5.

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**SUBMISSION OF FORMAL DRAWINGS**

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Attention: Bridget Gray, Chief Draftsperson

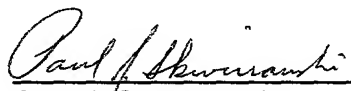
21 February 2002

Sir:

Attached hereto are eleven (11) sheets of FORMAL drawings for Figures 1, 2, 3A, 3B, 4A-4C and 5-11 which incorporate the corrections approved and entered in the prior applications upon which benefit is claimed in the above-identified new continuation application.

Approval and entry of the attached formal drawings are courteously solicited.

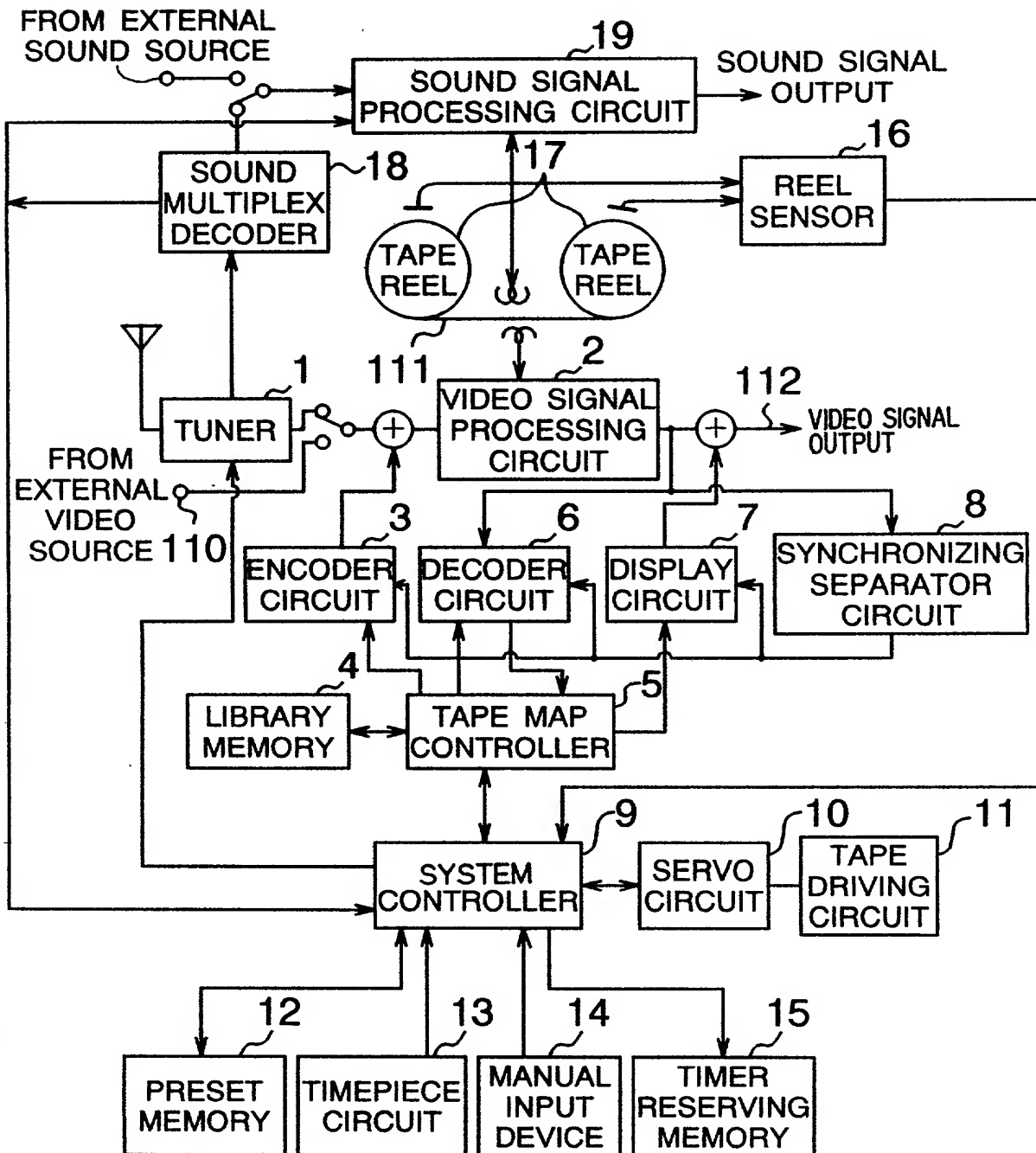
Respectfully submitted,

  
Paul J. Skwierawski  
Registration No. 32,173  
ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 North Seventeenth Street, Suite 1800  
Arlington, VA 22209  
Telephone 703-312-6600  
Facsimile 703-312-6666

**ATTACHMENTS:**

Eleven (11) Sheets FORMAL Drawings

FIG. 1



**FIG. 2**

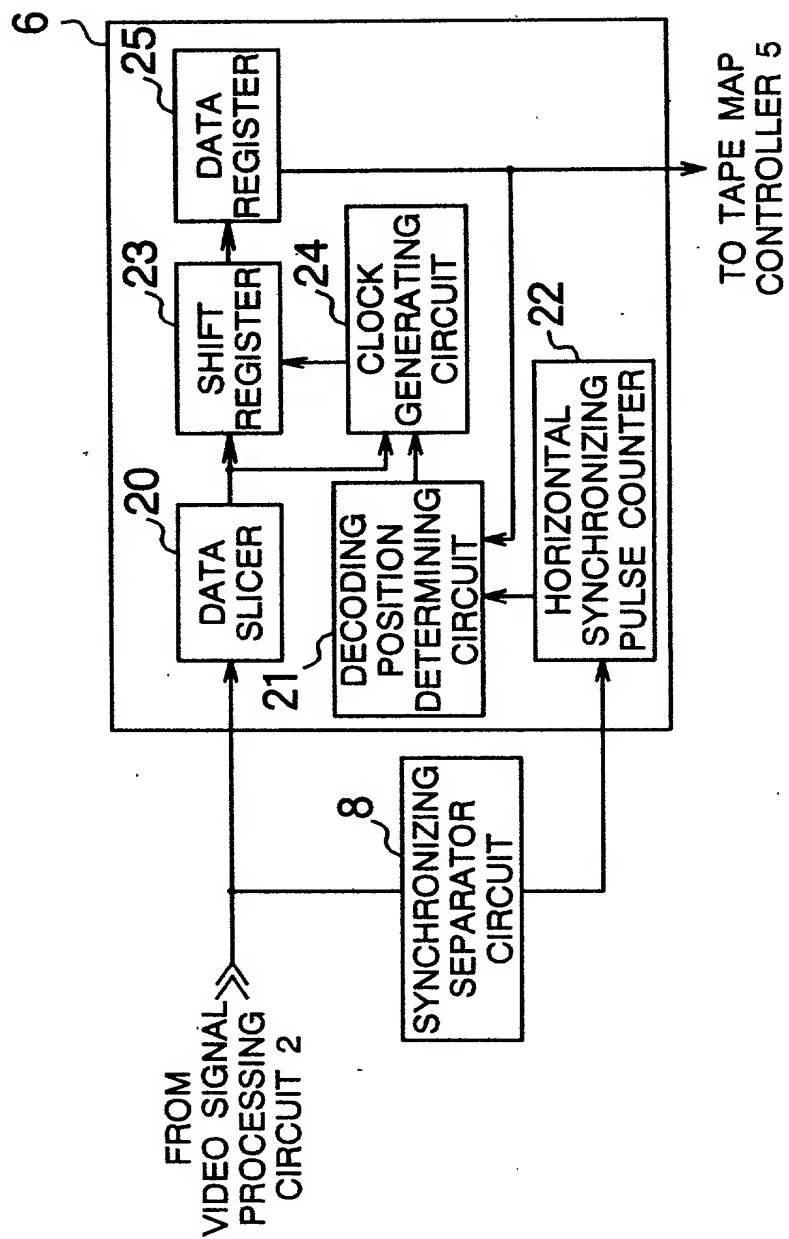


FIG. 3A

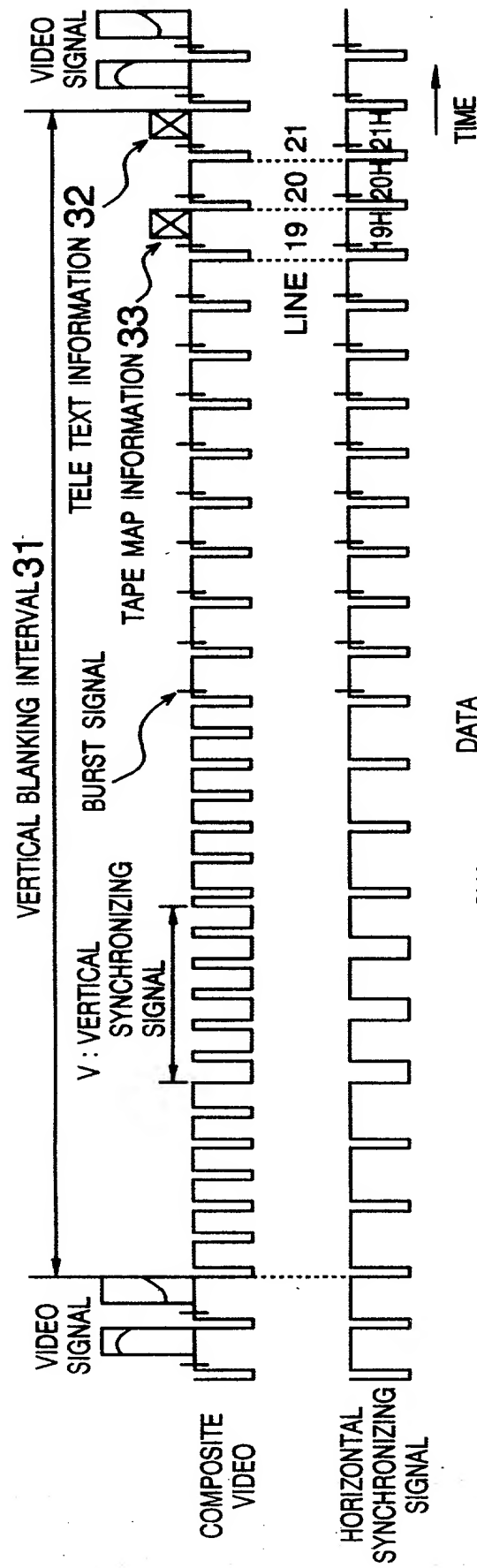
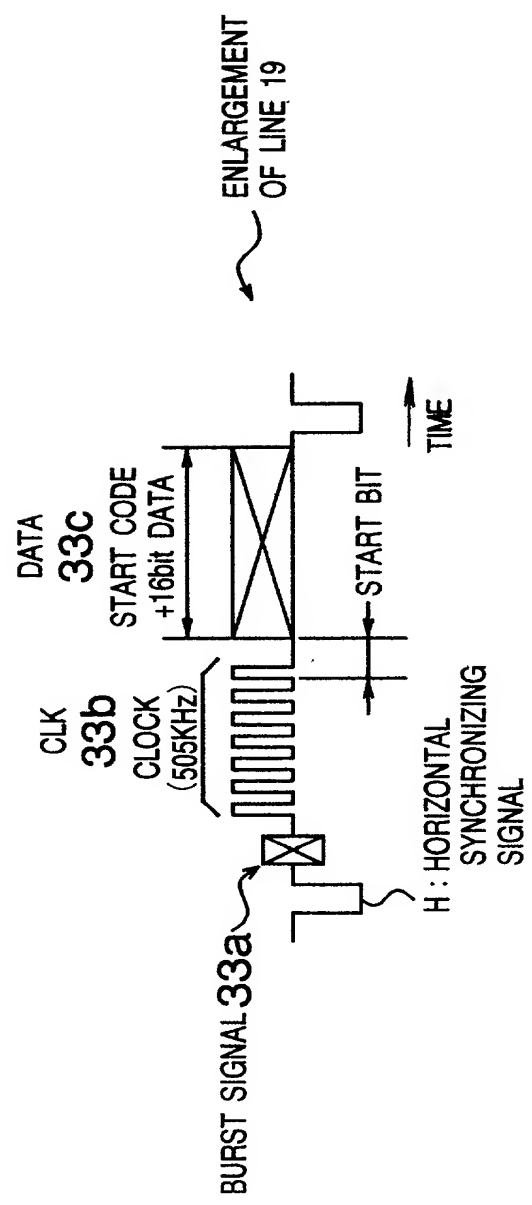
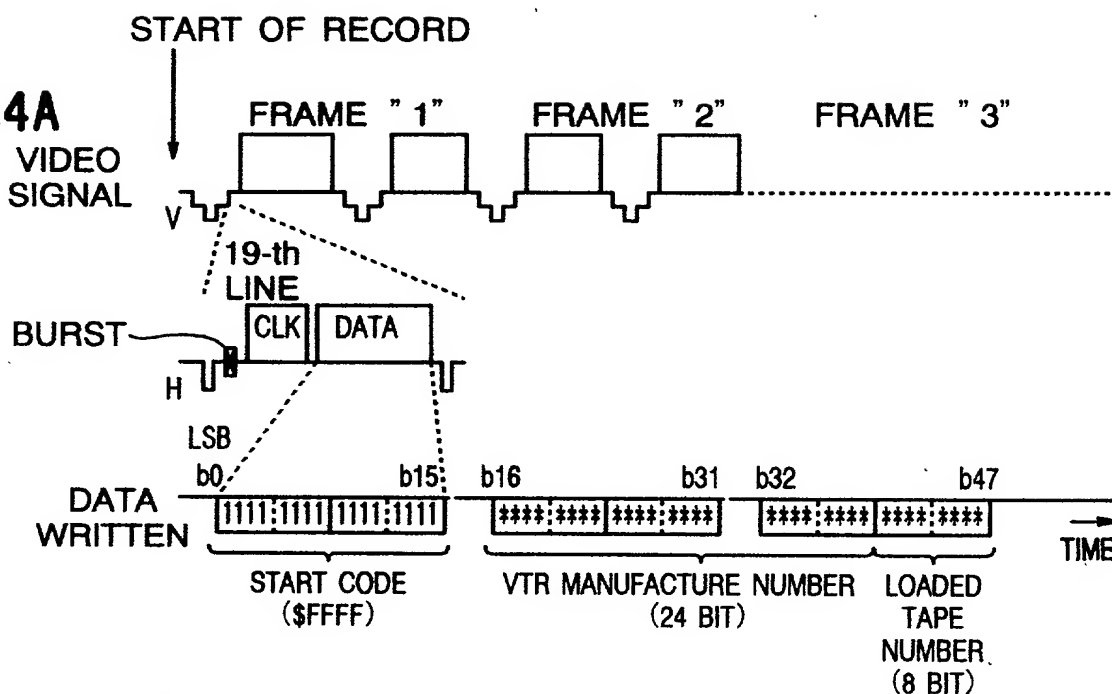


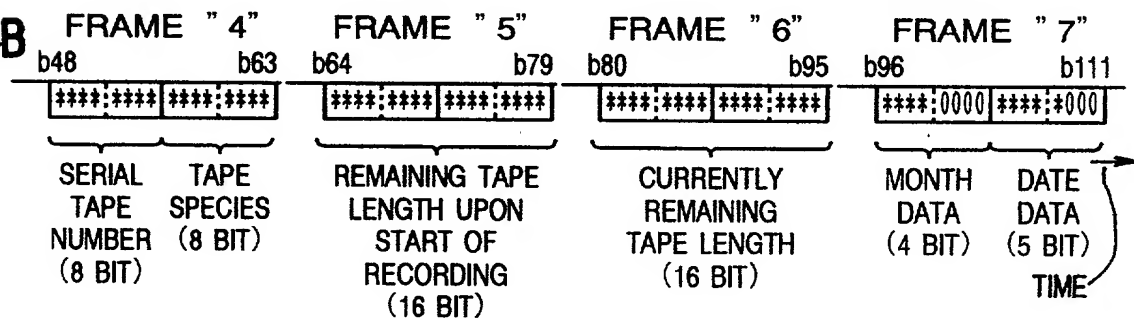
FIG. 3B



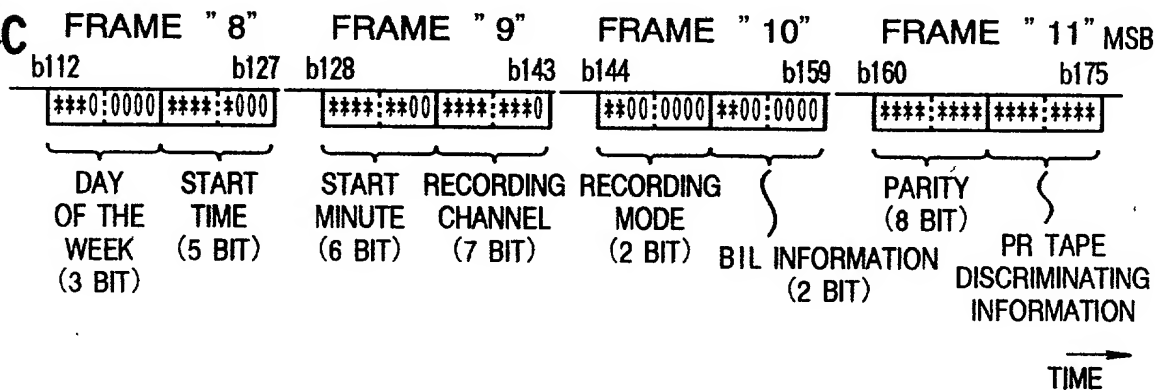
**FIG. 4A**



**FIG. 4B**



**FIG. 4C**





# FIG. 5

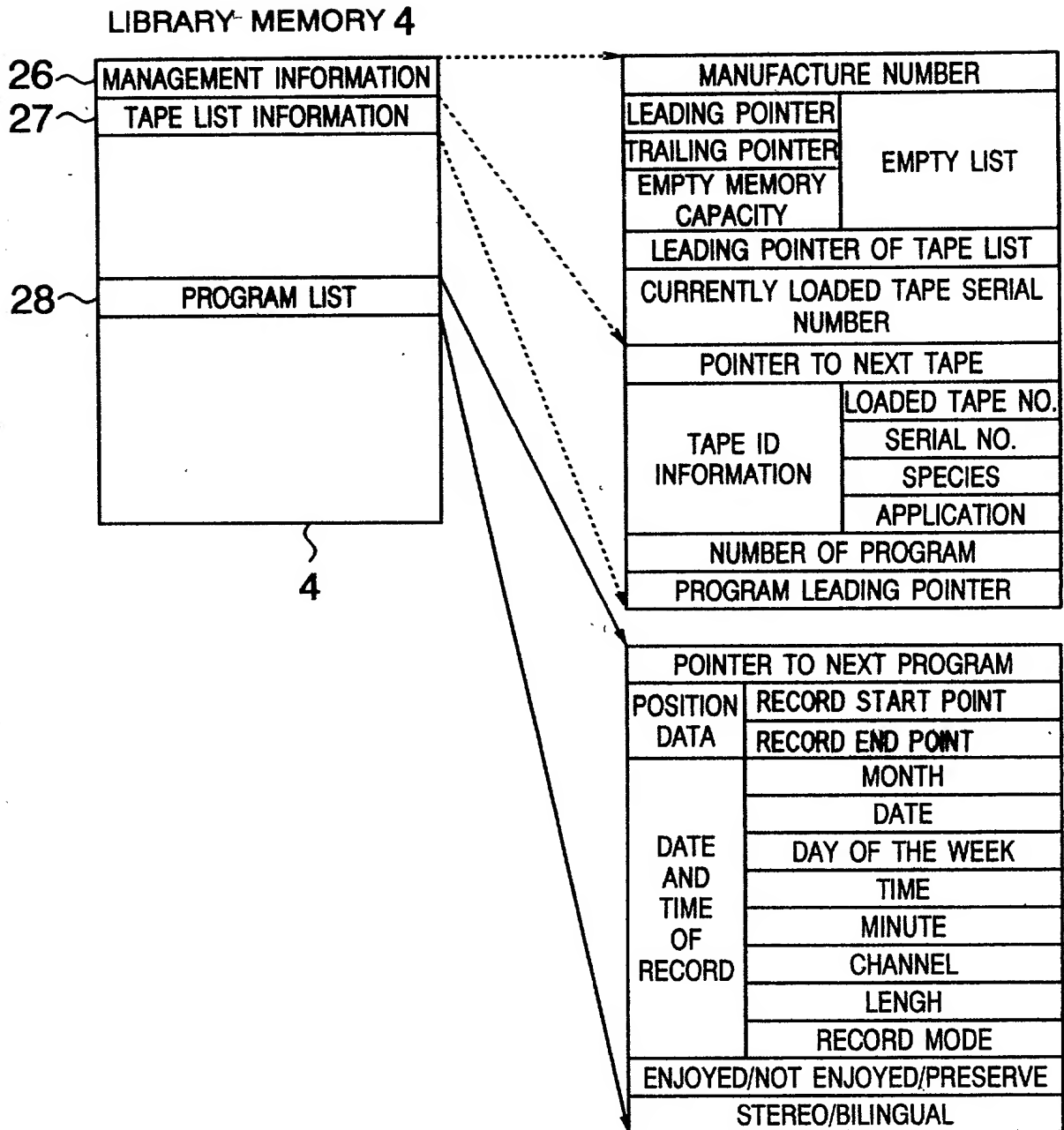
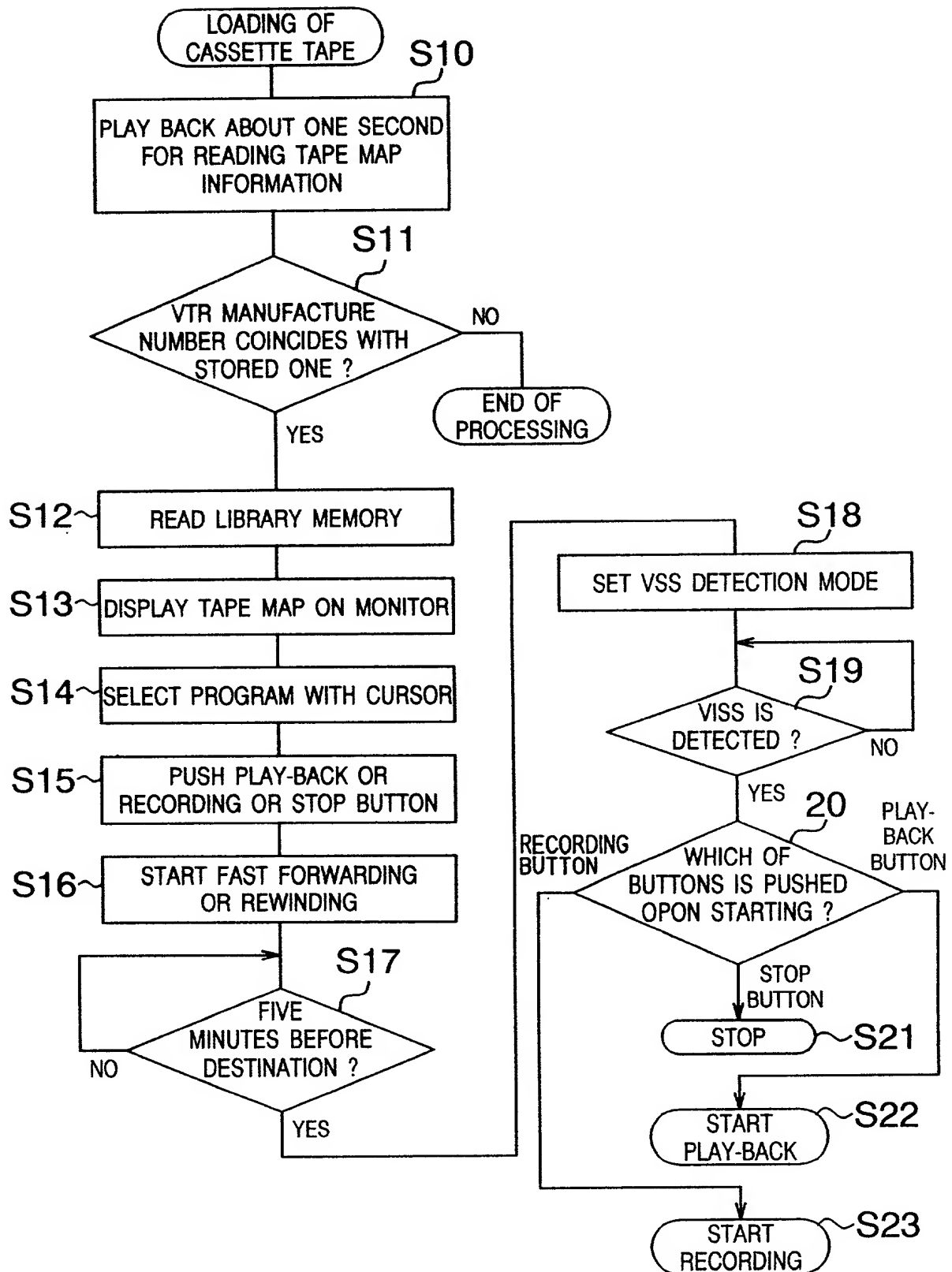


FIG. 7



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FIG. 6

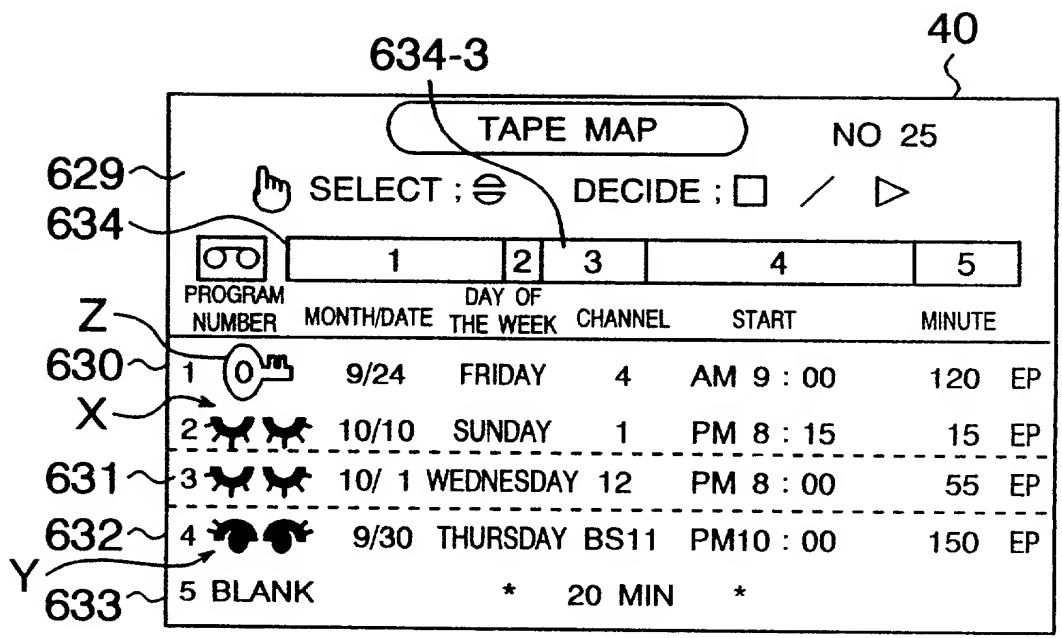
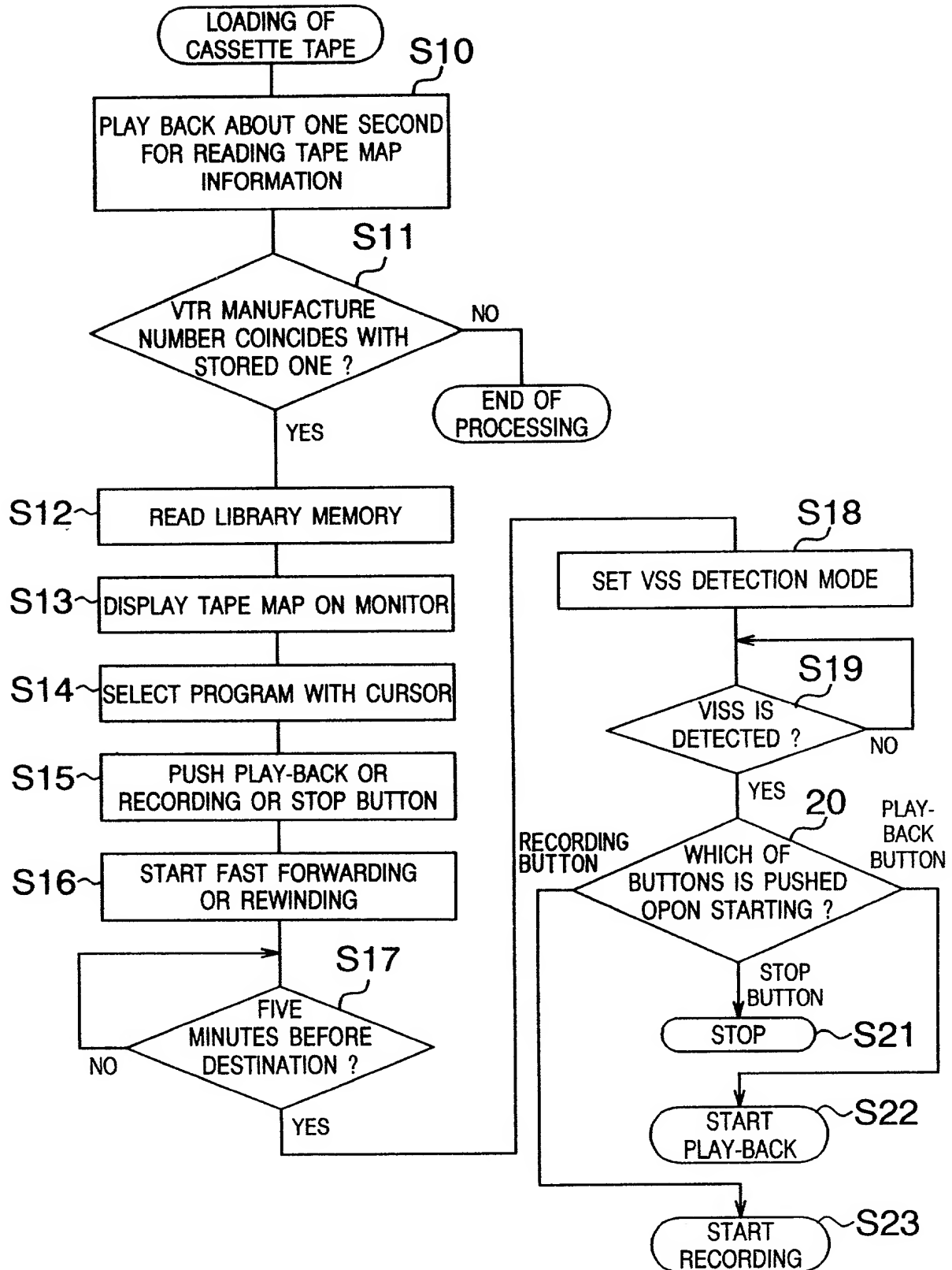


FIG. 7



# FIG. 8

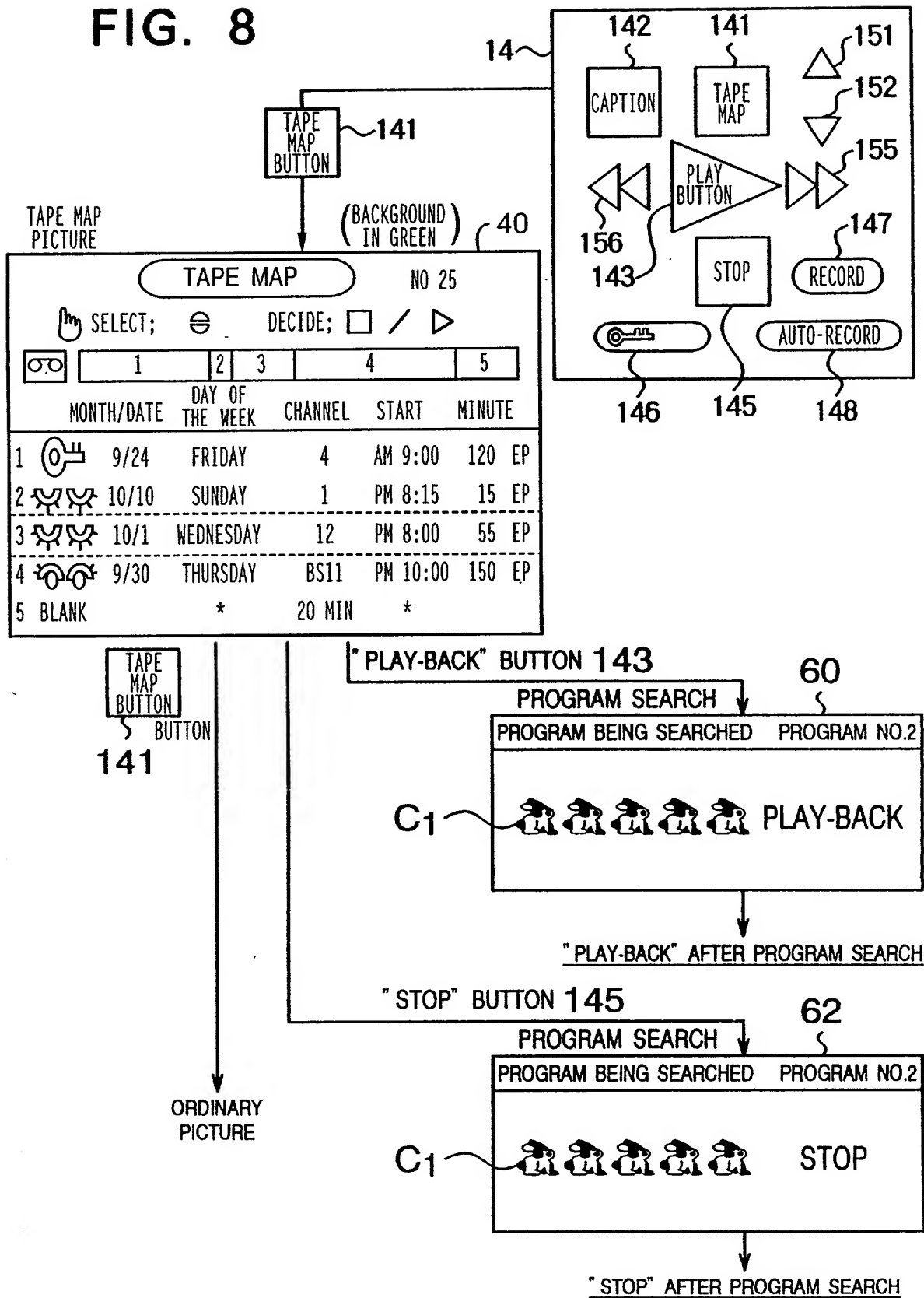


FIG. 9

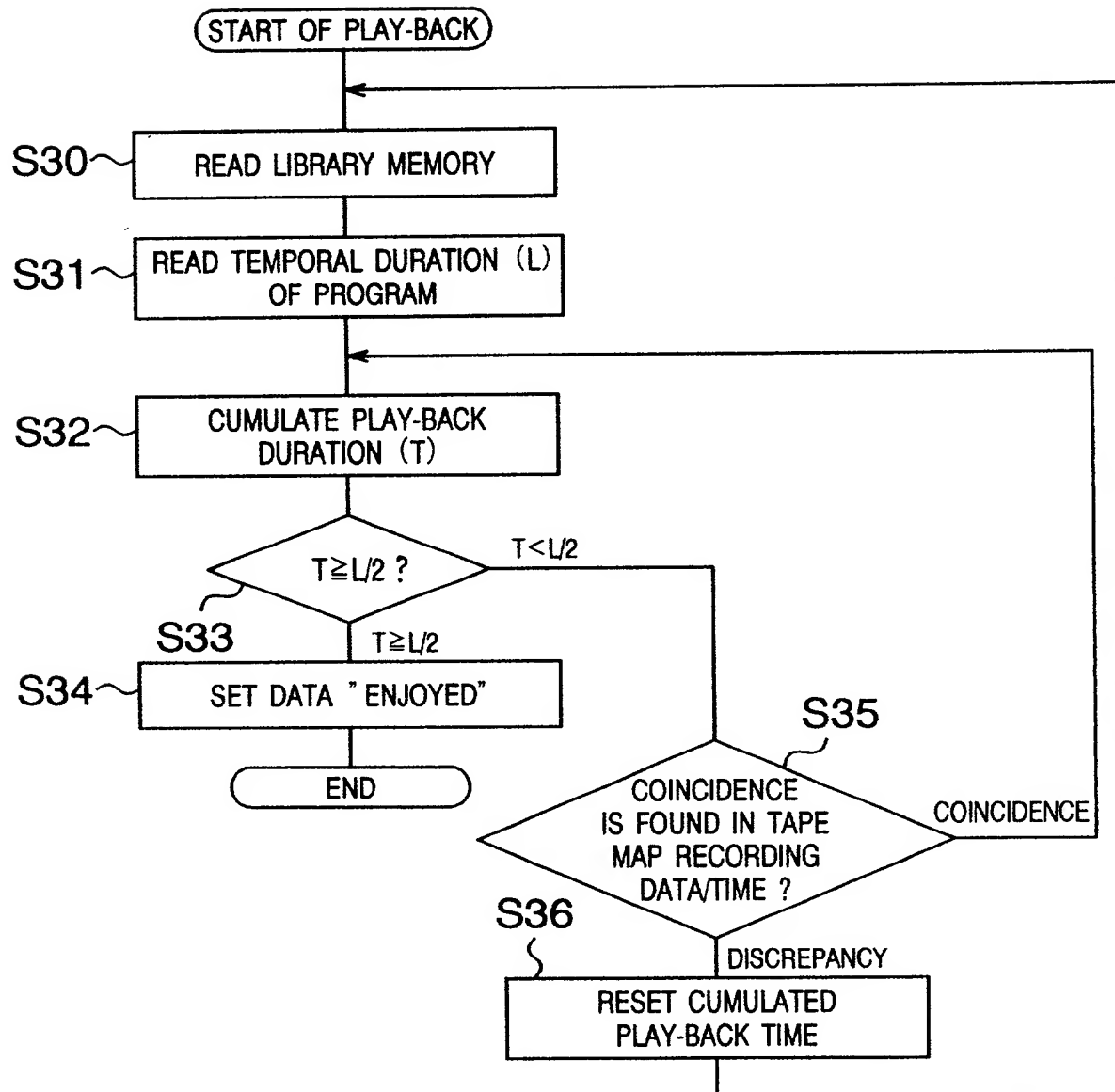


FIG. 10

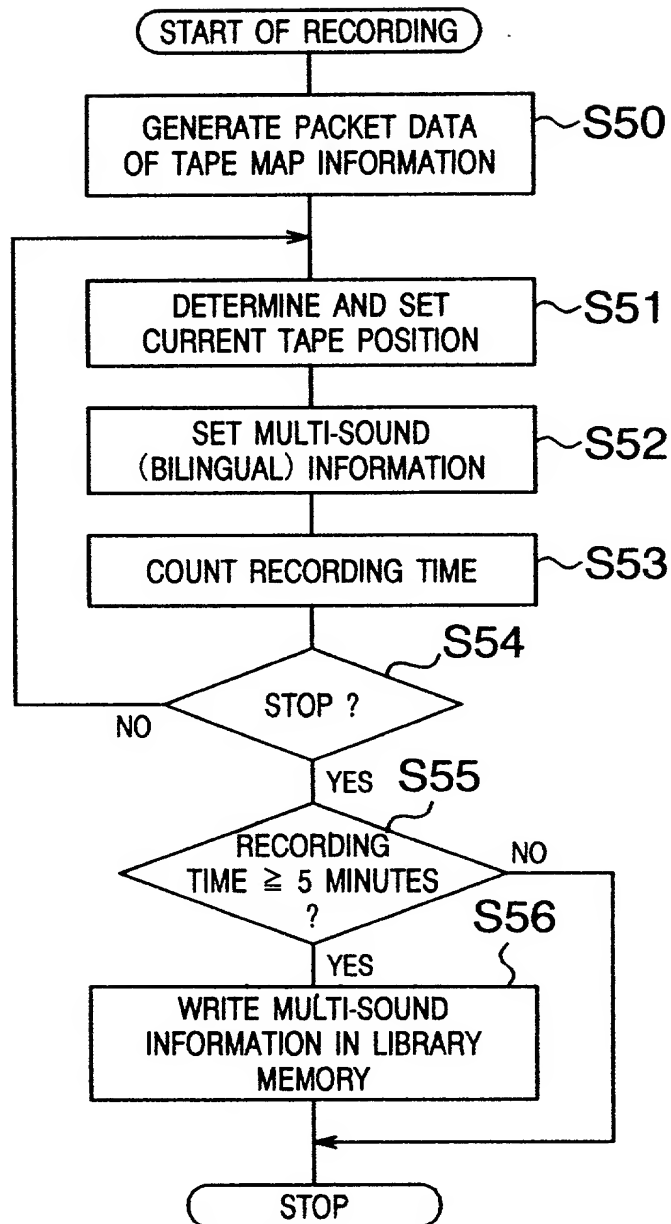


FIG. 11

